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Departmental Focus: Washington University, St. Louis, Missouri

W. Andrew Kofke, M.D., M.B.A., Editor AUA Update

The following is the first of what may become a series of articles on successful academic anesthesiology departments. It is based on an interview with Alex S. Evers, M.D., Professor and Chair, Department of Anesthesiology, Washington, University.

he Washington University department of anesthesiology is a successful academic department in an institution well known for academic excellence. Alex S. Evers, M.D., joined the faculty there 20 years ago and has been the department chair for 11 years. The department is fairly young, having been formed in the early 1970s; before that it had been a division of the department of surgery. As part of the division of surgery, it had an active anesthesiology residency with many graduates, including Thomas F. Hornbein, M.D. When the department was formed in 1972, the residency accreditation had lapsed. One of the goals that C. Ronald Stephen, M.D., had as the first chair of the department of anesthesiology at Washington University was to reinvigorate the residency. During that time, the department was predominantly clinical in its orientation. In 1982 William D. Owens, M.D., became the chair and initiated research activities, which up to that time were basically unknown to the department. In addition he substantially expanded the faculty and the residency. In 1992 Dr. Evers became chair and continued to augment the academic endeavors of the department.

A Department of Their Own

The main turning points in the history of this department happened in 1972, when it was formed, 1982, when Dr. Owens took over, and 1992, when Dr. Evers became chair. Prior to Dr. Owens' tenure, there had been a separate nurse anesthesia department that was moved under the control of the department of anesthesiology. In addition Dr. Owens initiated Washington University's research-based culture. In 1992, after Dr. Evers took over, there had been a private practice working alongside the academic practice. Dr. Evers consolidated all anesthesiologists under one academic department and continued to develop and expand research activities.

The clinical practice at Washington University is large, with about 60,000 cases per year plus active input into the intensive care units (ICUs), a large perioperative assessment clinic and a substantial pain program. Most of the clinical activity takes place on the university's main campus although there are several smaller off-campus sites that focus primarily on ambulatory care. The off-site areas constitute a small percentage (15 percent) of the total volume; they are overseen by the Washington University department because they are part of the health system.

When Smaller Is Better

There is a purposeful effort to keep the residency small relative to the number of cases. There are 90 faculty with

Departmental Focus: Washington University

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about 14 residents per year and about the same number of nurse anesthetists as residents. About 20 percent of the cases are performed personally by faculty. The department covers all major subspecialties of surgery, including computed tomography (CT), thoracic, transplant, neurology and pediatrics. There is no significant surgical subspecialty missing. The pediatric practice is quite large with about 10,000 annual cases at the separate children's hospital, which is physically connected to the main hospital.

Excellent Role Models

In terms of new faculty development, Dr. Evers has his own experience to call upon. He developed as a new faculty member under Dr. Owens when he was given a three-year period working with a mentor in another department in a laboratory with a 25-percent clinical commitment. That model resulted

About 60 percent to 70 percent of the faculty that have gone through this program have become independent, federally funded investigators.

in significant academic success for Dr. Evers, described by him to Dr. Kofke as the time that "we hit pay dirt." He continues to use that model on faculty who want to undertake a serious academic career. This has

become a departmental investment in academic training of faculty allowing for substantial initial laboratory time for collection of important preliminary data and skills that are important for subsequent academic success. These positions are not salaried at the same level as faculty, but they are well above the level of fellow, being salaried somewhere between faculty and fellow.

Dr. Evers indicates that this approach has had a high success rate. About 60 percent to 70 percent of the faculty that have gone through this program have become independent, federally funded investigators. He wryly notes that this path to independence usually takes longer than people expect. This program has heretofore been used for laboratory folks, but a similar track is now being developed at Washington University for those seeking clinical research careers. In addition there are grants offered through the Clinical Research Division (CRD). Through this program, any clinical faculty member who wants nonclinical time and support for research with a mentor (in or out of the department) can apply for a CRD grant request in writing, using the Foundation for Anesthesia Education and Research grant application format < www.faer.org>, and receive up to \$70,000 per year. The department funds about 70 percent of these proposals.

Rotations

The department's educational activities encompass education of residents and medical students. The nurse anesthesia program has been phased out as their affiliation broke off about two years ago. The resident education activities are unusual in several respects. The first is that they deliberately keep the program small so that the case-to-resident ratio is very high, which assures that the residents get cases that they need to do as opposed to cases being driven by clinical needs. The department also has concepts about the right mix of rotations during residency. All residents at Washington University per-



Alex S. Evers, M.D.

form at least five months of pediatrics based on the assumption that the field is very important in the general practice of anesthesiology and that the majority of clinicians encounter difficult pediatric problems at some point. All residents do pediatric hearts and all aspects of pediatric anesthesia. Dr. Evers noted that they "pushed the envelope" on critical care with a larger requirement of ICU rotations than the board requires; the department requires three months, and most residents complete four months. The department also has an active simulator program with the simulator immediately adjacent to the operating room and used frequently by the residents and medical students.

Medical students rotate through anesthesiology for a month during their third year. When Dr. Evers began his tenure, this was a problem in that medical students could not get an anesthesia rotation early enough in their medical school curriculum and thus had little experience with anesthesiology in order to make career choices. The department was successful in getting the time moved into the third year. The students start out with a few days in the simulator to get a quick start and then work one-on-one with faculty for the rest of the month. The department used to produce two to three students annually out of its 100-member class who would enter anesthesiology; most recently, 15 graduates are planning to go into anesthesiology.

Breaking Down Barriers

Washington University is an august institution that has received a number of Nobel Prizes. The institutional strength is used to the advantage of the department of anesthesiology. Dr. Evers indicates that one of the positive aspects of Washington University is the lack of departmental barriers. Various departments collaborate on grants and projects, and many faculty have joint appointments. Everyone who participates in laboratory science has a joint appointment in a basic science department, and those who do subspecialty anesthesiology also have joint appointments in the relevant departments. Individuals trained in internal medicine have joint appointments in internal medicine.

Washington University's graduate educational program is not departmentally based; it runs out of the Division of Biological and Biomedical Sciences < dbbs.wustl.edu>. Thus any qualified faculty member can become a member of the "division" and be able to train graduate students and grant a doctoral (Ph.D.) degree in Biological and Biomedical Sciences from the university. The anesthesiology faculty are active in the institutional Ph.D. training program. At any given time, they have several graduate students. For example, C. Michael Crowder, M.D., Ph.D., and Richard Hotchkiss, M.D., presently have graduate students training with them. The department currently does not have a National Institutes of Health (NIH) training grant as it was felt that the number of anesthesiologists seeking training in research was insufficient to warrant this. With the recent resurgence of trainee interest in research, the department is considering a training grant application.

Research Is Key

Dr. Evers indicates that he strives to create an academic culture of active discussion and conferencing which focuses on improving clinical practice that leads to initiation of research projects and where clinical practice incorporates the results of these studies and is increasingly based on "evidence." He stresses that a strong basic research environment is essential to this culture because it feeds new ideas into the clinical realm and fosters critical thinking skills. Dr. Evers believes that there has been significant progress with the cul-A significant part of the department functions in an academic manner although he does admit that not all do. A portion of faculty practice is based on research, although another element focuses on doing a good job in getting the work done. The community practice portion of the department tends to attract such folks — they are too far away to attend the conferences and do no research. They all, however, know that they are generating support for the academic mission and are contributing in that manner.

Dr. Evers indicates that his philosophy about supporting anesthesiologist-driven research is first and foremost to do the highest quality work and ensure an active training program for faculty and trainees in basic science.

Washington University has a significant critical care program. Department faculty run surgery and CT ICUs and provide staff for pediatric ICUs. The ICUs run in closed manner with a fellowship. The surgical ICU has joint attendings from anesthesiology and surgery; the CT ICU is run solely by faculty from the department of anesthesiology. The fellowship is clinical research-oriented with surgery and ICU fellows having basically the same job descriptions.

The pain program is quite active with on-site and off-site pain clinics. The residents rotate through the pain services and also have an active pain fellowship available. An active pain research program, led by Robert Gereau, M.D., is ongoing with clinical and basic sciences. This program focuses on basic and translational work, and it is the only pain clinic in

the institution and interacts extensively with psychiatry. Neurology is developing an interest in collaborating and, due to the outstanding nature of this department, is expected to make meaningful contributions.

Dr. Evers indicates that his philosophy about supporting anesthesiologist-driven research is first and foremost to do the highest quality work and ensure an active training program for faculty and trainees in basic science. In his department, there is a mix of Ph.D. and M.D. faculty researchers. He prefers that anesthesiologists number at least 50 percent of this group. In clinical research areas, there is a greater number of M.D. investigators. Dr. Evers suggests in principle, however, that it would be good to have some Ph.D. collaborators, epidemiologists, for example. In any event, he endeavors to have all areas of research be multidisciplinary with, importantly, inclusion of clinician-scientists. department has done well with respect to NIH funding with about six to seven clinician-scientists in the basic research area presently receiving funding. The Washington University Department of Anesthesiology has consistently been in the top five nationally in departmental-based NIH funding.

On a Mission

Dr. Evers suggests that one of the most important things a chair should do is maintain focus on the academic mission. There is significant pressure on chairs to provide efficient and cost-effective service, and he suggests that a successful academic chair cannot sacrifice academic issues for expediency. He also indicates that a successful chair needs to pay close attention to the people in his or her department: the faculty, residents and staff. The success of the department is based solely on the success of the individual faculty members. Plans that are too grand for the department will fail. He emphasizes that the job of the chair is to serve, organize and guide the faculty, hopefully to achievement and satisfaction.

He goes on to suggest that business activities of the department are important as there is "no mission without a margin." It is important, however, to remember that the business activities are simply a tool, not a goal. If academic success is your goal, you will fail if you ignore either the business or the academic aspects of the department. If you focus primarily on the business, all you will develop is a successful private practice.

In closing, Dr. Evers suggests that "being a chair is a really hard job ... the reason to take the job is not for the honor, but because you want a challenging job." These are challenging times with great opportunities for great success.

Editor's Note: The criteria for my choice to focus on this department were the long tenure of the current chair, the known research productivity of the institution and the reputation of Washington University in general. There are quite a few other departments in the United States that also could have been highlighted, and they will have their chance in the future. The choice is subjective and determined solely by the editor.

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SAMBA Advancing the Study of Anesthesiology

Frances Chung, M.D., President Society for Ambulatory Anesthesia

The Society for Ambulatory Anesthesia (SAMBA) is a nonprofit organization whose purpose is to advance the study and growth of ambulatory anesthesiology and to encourage high ethical and professional standards by fostering and encouraging research, education and scientific progress in ambulatory anesthesiology.

The Society, a recognized subspecialty organization of the American Society of Anesthesiologists (ASA), supports, encourages and participates in the development and promotion of policies and programs of ASA and other professional organizations regarding ambulatory anesthesiology.

SAMBA is a great Society due in a large part to the dedicated leadership of the SAMBA Board of Directors and committee chairs.

The missions of SAMBA are:

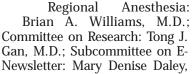
- To advance the study of ambulatory anesthesiology, to contribute to its growth and influence, to encourage specialization in the field of ambulatory anesthesiology and to encourage high ethical and professional standards by fostering and encouraging research, education and scientific progress in ambulatory anesthesiology;
- To publish and encourage the dissemination to the profession and to the public of information concerning the role of anesthesia in ambulatory surgery and to issue publications of scientific and cultural interest;
- 3. To support, encourage and participate in the development and promotion of policies and programs of ASA and other professional organizations regarding ambulatory anesthesiology; and
- 4. To support, encourage and participate in the development of guidelines of postgraduate education for qualification as a subspecialist in ambulatory anesthesiology and guidelines for approval of postgraduate training programs in ambulatory anesthesiology.

SAMBA committees are the main framework of our organization. The committee chairs and committee members carry out the missions of the Society and make it possible for SAMBA to succeed. For the coming year, the committees in SAMBA and their chairs are: Ad Hoc Committee on Private Practice: Fred Ernst, M.D.; Committee on Affiliation: Jeffrey L. Apfelbaum, M.D.; Committee on Annual Meeting: Lucinda L. Everett, M.D.; Committee on Awards: Peter S. Glass, M.D.; Committee on Bylaws: Mary Ann Vann, M.D.; Committee on Communications: Melinda L. Mingus, M.D.; Committee on Development: John A. Dilger, M.D.; Committee on Education: Thomas W. Cutter, M.D.; Committee on Finance and Budget: Jeffrey B. Brand, M.D.; Committee on International Relations: Raafat S. Hannallah, M.D.; Judicial Committee: Kathryn E.

McGoldrick, M.D.; Committee on Latin American Relations: Mario Conceicao, M.D.; Committee on Membership:

Yung-Fong Sung, M.D.;
Committee on Mid
Year Meeting:
Ronald S. Litman,
D.O.; Committee
on Office-Based
A n e s t h e s i a:
Meena S. Desai,
M.D.; Committee
on Publications:
Girish P. Joshi,
M.D.; Committee on
Regional Anesthesia:

A Williams M.D.;





Frances Chung, M.D.

M.D.; Subcommittee on Scientific Papers: Dorothy J. Pavlin, M.D.; Nominating Committee: Lydia A. Conlay, M.D., Ph.D.

Outcomes Research Award

The success of SAMBA depends on our education and research mission. Evidence-based medicine is extremely important. In order to encourage this, SAMBA will be giving a \$150,000 Outcomes Research Award in 2004 and 2005. This marks the second time that SAMBA will present a grant to fund outcomes research in ambulatory anesthesiology. The recipient of the Society's first Outcomes Research Award was Lee A. Fleisher, M.D., Baltimore, Maryland, for his research in "Outcomes in Ambulatory Anesthesia Related to Location of Care."

SAMBA's Committee on Research has prepared a request for proposal to establish the requirements for outcomes-oriented research for the purpose of elevating the quality of patient care in ambulatory anesthesiology and catalyzing high-quality research in ambulatory anesthesiology. Preferred outcomesoriented research topics are those that will yield results applicable to many patients, if not the majority of patients, who undergo modern ambulatory anesthesia.

We encourage all investigators to apply. Physicians who wish to receive a complete copy of the request for proposal and an application for the Outcomes Research Award should contact SAMBA at (847) 825-5586 or download the information from the Society's Web site at < www.sambahq.org> . The application submission deadline is January 15, 2004.

For more information about SAMBA, visit:

www.sambahq.org

SCA Celebrates 25 Years

Glenn P. Gravlee, M.D., SCA President Columbus, Ohio

he year 2003 marks the 25th anniversary of the Society of Cardiovascular Anesthesiologists (SCA), which has a current membership of just over 7,600, including 1,256 international members. The mission of SCA — to facilitate education, research and clinical excellence in the fields of cardiovascular and thoracic anesthesia — is supported by a robust array of activities.

A THESION SCA continues to offer a diverse mixture of educational activities. The 2003 Annual Meeting in Miami Beach, Florida, hosted 900 registrants who shared a broad-based educational program and a research forum for 141 scientific abstracts. The 2004 Annual Meeting in Honolulu, Hawaii, will offer an equally outstanding range of educational sessions and scientific abstracts from April 24-28, 2004. The Annual Comprehensive Review and Transesophageal Echocardiography (TEE) Update typically attracts more than 600 registrants to San Diego, California, in February. A great strength of this meeting is its faculty, which includes prominent cardiologists and cardiothoracic surgeons as well as an outstanding group of cardiovascular anesthesiologists. The Comprehensive TEE Review will again be held in San Diego, California on February 9-14, 2004.

Upcoming SCA Events

- Seventh Annual Comprehensive Review and TEE Update, San Diego, California, February 9-14, 2004
- Ninth Annual Update on Cardiopulmonary Bypass, Snowmass, Colorado, March 14-19, 2004
- 2004 Annual Meeting, Honolulu, Hawaii, April 24-28, 2004
- Ninth International Congress of Cardiothoracic and Vascular Anesthesia, Tokyo, Japan, September 9-12, 2004

The Annual Update on Cardiopulmonary Bypass covers issues on cardiopulmonary bypass (CPB) and perioperative patient care in a context that addresses educational needs of anesthesiologists, perfusionists and cardiac surgeons. 2004 CPB update will take place in Snowmass, Colorado, on March 14-19, 2004. SCA is collaborating with the Japanese Society of Cardiovascular Anesthesiologists to offer the Ninth International Congress of Cardiothoracic and Vascular Anesthesia on September 9-12, 2004, in Tokyo, Japan. In addition to an outstanding internationally oriented educational program, this meeting will offer the opportunity for presentation of original research via scientific abstract submissions. The SCA Annual Monograph continues to serve as an excellent educational entitlement for SCA members. The 2003

monograph on perioperative organ protection, edited by Mark F. Newman, M.D., exemplifies the state-of-the-art quality of these publications.

Despite two "false starts" in the form of rejections from the Åccreditation Council for Graduate Medical Education, SCA persists in its pursuit of accreditation for fellowship programs in cardiothoracic anesthesiolo-

gy. Accreditation will provide strong curricular guidance and much-needed recognition for approximately 75 existing fellowship programs while preserving much of the educational

and Research.



Glenn P. Gravlee, M.D.

flexibility that identifies individual programs. Funding starter grants for early and mid-career investigators constitutes an important and relatively recent SCA activity. To date SCA has funded 40 research projects and hopes that its newly established research and education fund will grow to permit increasing support of scientific investigation in the future. Some of SCA's research funding has been awarded in collaboration with the Foundation for Anesthesia Education

SCA enjoys collegial relationships with the American Society of Anesthesiologists and other prestigious professional organizations such as the National Board Echocardiography, the American Society of Echocardiography and the American Heart Association (AHA). SCA recently strengthened its ties to AHA by increasing its participation in several AHA councils and agreeing to co-sponsor a panel discussion at the AHA Annual Meeting. Specifically SCA now has representatives on the AHA councils on cardiothoracic and vascular surgery and on cardiopulmonary and critical care. SCA recently renewed its long-standing journal relationship with the International Anesthesia Research Society so Anesthesia & Analgesia will continue to serve as the official journal of SCA in years to come.

The SCA invites AUA members who are not already SCA members to attend one of our educational activities and to peruse our Web site at < www.scahq.org> . In particular the SCA Annual Meeting program contains substantial educational and scientific content that will interest academic anesthesiologists even if they do not anesthetize patients for cardiac surgical procedures.

For more information on SCA, please visit:

www.scahq.org

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Educational Advisory Report Board Property Report R

Implications of new ACGME Regulations for Anesthesiology Training Programs

Charles W. Whitten, M.D. Dallas, Texas

Effective July 1, 2003, it is necessary for all training programs in anesthesiology to adhere to common program requirements as outlined by the Accreditation Council for Graduate Medical Education (ACGME). Below is a brief summary of the new guidelines as they impact resident duty hours and the working environment.

- 1. *Supervision of Residents*: All patient care must be supervised by qualified faculty. Faculty and residents must be educated to recognize the signs of fatigue and adopt policies to prevent and counteract the potential negative effects.
- 2. Duty Hours: Duty hours are defined as all clinical and academic activities related to the residency program, i.e., patient care (both inpatient and outpatient), administrative duties related to patient care, the provision for transfer of patient care, time spent in-house during call activities and scheduled academic activities such as conferences. Duty hours must be limited to 80 hours per week, averaged over a four-week period, inclusive of all in-house call activities. Residents must be provided with one day in seven free from all educational and clinical responsibilities, averaged over a four-week period, inclusive of call. "One day" is defined as one continuous 24-hour period free from all clinical, educational and administrative activities. A 10-hour time period should be provided between all daily duty periods.
- 3. On-Call Activities: In-house call is defined as those duty hours beyond the normal workday when residents are required to be immediately available in the assigned institution. In-house call must occur no more frequently than every third night, averaged over a four-week period. Continuous onsite duty, including in-house call, must not exceed 24 consecutive hours. Residents may remain on duty for up to six additional hours to participate in didactic activities, transfer care of

patients, conduct outpatient clinics and maintain continuity of care. No new patients may be accepted after 24 hours of continuous duty.

At-home call (pager call) is defined as call taken from outside the assigned institution. The frequency of at-home call is not subject to the every-third-night limitation. Residents taking at-home call must be provided with one day in seven completely free from all educational and clinical responsibilities averaged over a four-week period.



Charles W. Whitten, M.D.

When residents are called into the hospital from home, the hours residents spend in-house are counted toward the 80-hour limit.

- 4. *Moonlighting*: Must not interfere with the ability of the resident to achieve the goals and objectives of the educational program. Internal moonlighting must be counted toward the 80-hour weekly limit on duty hours.
- 5. *Duty Hours Exception*: A Residency Review Committee may grant ex ceptions for up to 10 percent of the 80-hour limit to individual programs based on a sound educational rationale. Prior permission of the institution's graduate medical education committee is required.

We have entered a new era in postgraduate medical training. It will be imperative that all of us affiliated with anesthesiology residency training programs closely monitor work hours. It is also our responsibility to ensure that trainees receive adequate clinical and didactic experience in light of these new regulations. The future of our specialty depends upon it.

Mark your calendars now to attend the 2004 AUA Annual Meeting on May 13-15 in ...



For more information, visit <www.auahq.org> and click on "Annual Meeting."

Letter to the Editor

Severinghaus Article Had It All

Dr. Kofke, your interview of John W. Severinghaus, M.D., in the Fall 2003 *AUA Update* was outstanding. It captured John and his outstanding contributions in an exceptional manner, depicting not only his many scientific contributions but many of his human qualities as well.

John P. Kampine, M.D., Ph.D. Milwaukee, Wisconsin

New -*Chairs*

The following is a list of new anesthesiology department chairs from around the country for the time period of November 2002 through October 2003.

(Source: Association of Anesthesiology Program Directors/Society of Academic Anesthesiology Chairs)

Rodger E. Barnette, M.D. Professor and Acting Chair Temple University Philadelphia, Pennsylvania (Replaces Lydia A. Conlay, M.D., Ph.D.)

Burton A. Briggs, M.D. Professor and Interim Chair Loma Linda University Loma Linda, California (Replaces Wayne K. Jacobsen, M.D.)

Lydia A. Conlay, M.D., Ph.D. Professor and Chair Baylor College of Medicine Houston, Texas (Replaces Burdett S. Dunbar, M.D.)

Ellise S. Delphin, M.D. Professor and Chair UMDNJ, New Jersey Medical School Newark, New Jersey (Replaces Melissa L. Davidson, M.D.)

Kenneth H. Gwirtz, M.D. Professor and Chair Indiana University School of Medicine Indianapolis, Indiana (Replaces Robert K. Stoelting, M.D.)

Christine W. Hunter, M.D. Associate Professor and Interim Chair UMDNJ, Robert W. Johnson Medical School New Brunswick, New Jersey (Replaces Lawrence G. Kushins, M.D.)

Jeffrey R. Kirsch, M.D. Professor and Chair Oregon Health Sciences University Portland, Oregon (Replaces Per-Olof Jarnberg, M.D.)

Bruce R. Laverty, M.D. Chair Naval Medical Center San Diego, California (Replaces Timothy L. Sternberg, M.D.)

Robert S. McKay, M.D. Associate Professor and Interim Chair University of Kansas School of Medicine Wichita, Kansas (Replaces Wesley D. Helena, M.D.) John A. Ulatowski, M.D. Associate Professor and Interim Chair Johns Hopkins University Baltimore, Maryland (Replaces Roger A. Johns, M.D.)

John H. Wills, M.D. Professor and Chair University of New Mexico School of Medicine Albuquerque, New Mexico (Replaces Stephen E. Abram, M.D.)

An Experiment Using MRI



Researchers at a prestigious New England medical school in an N-of-one study tested the null hypothesis: Blue Bell anesthesia carts are not ferromagnetic. Results: The null hypothesis is rejected. The reviewers criticized their design as underpowered. However, the authors cautiously suggest that the effect may be robust enough to allow the result to be generalizable ... Photo found floating in a bottle in the Charles River.

Winter 2003 AuA Update





400 and Growing!

The Foundation for Anesthesia Education and Research (FAER) plants the seeds for future anesthesia knowledge — essential for our medical specialty. The FAER Board wishes to express its sincere appreciation to past and present supporters and has great expectations for those whom we have sponsored. The names of the 400+ American Society of Anesthesiologists/FAER award recipients are on the tree, and we look forward to seeing the tree grow.

Editor's note: The Foundation for Anesthesia Education and Research advises me that it has made every effort to be accurate in its depiction of past awardees and their origin states. Please contact Kerry Todd < todd.kerry@mayo.edu> with any comments.